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EXAMINER

MANNING, JOHN

| ART UNIT | PAPER NUMBER |
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2614

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/734,973

Applicant(s)

PANABAKER, RUSTON

Examiner

John Manning

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18,30,36-38 and 40-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18,30,36-38 and 40-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-44 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5, 7-11, 14-18, 36-38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr (US Pat App Pub No 2003/0133043) in view of Rafey et al. (US Pat No US Pat No 6,452,598) further in view of the ATVEF specification and further in view of Keronen et al. (US Pat No 6,567,530).

In regard to claim 1, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The claimed step of obtaining a schema document, the schema document comprising a trigger data structure an announcement data structure, and a package data structure defining enhanced programming content is met by the content creator 12 providing enhancement data to transport operator 14 (Figure 1). The enhancement data provided by the content creator 12 includes "an ATVEF announcement, a resource, and a trigger"

Art Unit: 2614

(Paragraph 0020, Lines 3-4). The enhancement data includes synchronization information (Paragraph 0013). The announcement data meets the limitation of a package data structure defining enhanced programming content. "An announcement may describe the location of both the resource stream and the trigger stream" (Paragraph 0021, Lines 5-6). The claimed step for a timeline data structure regarding timing for the delivery of enhanced programming content is met by storage medium 113 and the controller 106 (Figure 2). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106. "The controller 106 may be run under control of a software routine 108 (referred to as a transport routine). The transport routine 108 may initially be stored in a storage medium 104 and loaded by the controller 106 for execution. Instructions and data of the transport routine 108 may also be stored in the storage medium 104" (Paragraph 0034, Lines 12-17). "The enhancement data and special announcements may be stored in a storage medium 113" (Paragraph 0034, Lines 23-25). The enhancement data stored includes an ATVEF announcement, which provides the instruction for delivery of the enhanced programming content. "The controller 106 detects presence of announcements when they appear at the ATVEF announcement address and port in the transport operator system 14. The announcements are separated out onto different IP addresses corresponding to the A/V channels, with one IP address assigned for the one or more ATVEF announcements associated with each A/V channel" (Paragraph 0038, Lines 12-19). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106, where the enhancement data includes synchronization information. The examiner interprets

Art Unit: 2614

synchronization information to be timeline data. The reference fails to explicitly disclose the claimed step of the timeline data structure specifying specific times relative to a specific start time and a particular order for delivering each of the trigger, announcement and package data structures to the receiver. The reference also fails to explicitly disclose the step analyzing the timeline data structure to determine when to deliver each of the trigger, announcement and package data structures. Rafey teaches a timeline data structure specifying specific times relative to a specific start time and a particular order for delivering each of the trigger, announcement and package data structures to the receiver and analyzing the timeline data structure to determine when to deliver each of the trigger, announcement and package data structures so as to synchronize the enhanced content with the video in real time. The combination of Carr and Rafey fail to explicitly disclose the timeline including a loop attribute to prevent multiple deliveries of the enhanced programming content to the receiver. The ATVEF specification teaches a loop attribute to prevent multiple deliveries of the enhanced programming content to the receiver. The ATVEF specification discloses with respect to the parameter RetransmitExpiration: "This allow a resource to be carouseled, or sent repeatedly to increase the chances of delivery without missing segments. Set to zero if the resource will not be retransmitted" (Page 22). Consequently, it would have been obvious to one of ordinary skill in the art to the combined teaching with a loop attribute to prevent multiple deliveries of the enhanced programming content to the receiver so as to conform to the ATVEF specification. The combination of Carr and Rafey and the ATVEF specification fail to explicitly disclose the step of verifying the authenticity of the

Art Unit: 2614

schema document by comparing the schema document against a stored standardized schema document. Keronen teaches verifying the authenticity of a document by comparing the schema document by comparing a document against a stored standardized document so as to ensure that a document is of proper form (Col 2, Lines 22-27). Consequently, it would have been obvious to one of ordinary skill in the art to the combined teaching with verifying the authenticity of a document by comparing the schema document by comparing a document against a stored standardized document so as to ensure that a document is of proper form.

In regard to claim 3, the claimed step for accessing the schema document comprises the step of retrieving the schema document from a repository containing a plurality of schema documents is met by storage medium 113 and the controller 106 (Figure 2 of Carr). The enhancement data is stored in storage medium 113 and is "accessed" by the controller 106. "The controller 106 may be run under control of a software routine 108 (referred to as a transport routine). The transport routine 108 may initially be stored in a storage medium 104 and loaded by the controller 106 for execution. Instructions and data of the transport routine 108 may also be stored in the storage medium 104" (Paragraph 0034, Lines 12-17). "The enhancement data and special announcements may be stored in a storage medium 113" (Paragraph 0034, Lines 23-25). The enhancement data stored includes an ATVEF announcement, which provides the instruction for delivery of the enhanced programming content. "The controller 106 detects presence of announcements when they appear at the ATVEF announcement address and port in the transport operator system 14. The

Art Unit: 2614

announcements are separated out onto different IP addresses corresponding to the A/V channels, with one IP address assigned for the one or more ATVEF announcements associated with each A/V channel" (Paragraph 0038, Lines 12-19).

In regard to claim 5, the claimed limitation of the enhanced programming content comprising at least one of an announcement element, a trigger element, and a package element is met by the content creator 12 providing enhancement data to transport operator 14 (Figure 1 of Carr). The enhancement data provided by the content creator 12 includes "an ATVEF announcement, a resource, and a trigger" (Paragraph 0020, Lines 3-4). The enhancement data includes synchronization information (Paragraph 0013). The examiner interprets the resource to be the package element.

In regard to claim 7, the claimed step of synchronizing the enhanced programming content with the television programming is met by "a trigger synchronizes the enhancement data with the TV transmission" (Paragraph 0021 of Carr).

In regard to claim 8, the reference discloses that the enhancement data is delivered with a communications protocol. "The three components may be transmitted using Internet Protocol (IP) multicast to the receivers" (Paragraph 0021 of Carr).

In regard to claim 9, the Carr reference discloses two types of protocols which met the limitations for transport A protocol and transport B protocol. "The three components may be transmitted using Internet Protocol (IP) multicast to the receivers. An IP multicast standard is described in Request for Comment (RFC) 1301, entitled "Multicast Transport Protocol." RFCs may be available at website address [<http://www.ietf.org/rfc.html>]" (Paragraph 0020, Lines 4-8). And, the "ATVEF

Art Unit: 2614

Specification may utilize a one-way transmission protocol (the Unidirectional Hypertext Transfer Protocol or UHTTP, described in the ATVEF Specification) to deliver resource data" (Paragraph 0021, Lines 9-12).

In regard to claim 10, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose delivering the enhanced programming content before a deliver-by time. However, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the Carr system with delivering the enhanced programming content before a deliver-by time so as to ensure that the receiver system receives the enhanced programming data necessary for an interactive viewing experience.

In regard to claim 11, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The reference fails to explicitly disclose delivering the enhanced programming content by a start time. However, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the Carr system with delivering the enhanced programming content by a start time so as to allow the receiver system to be interactive.

In regard to claim 14, the claimed step for delivering an announcement signal comprising the announcement data structure to the receiver, the announcement signal identifying tile availability of enhanced programming content to the receiver is met by the ATVEF announcement. "Generally, an ATVEF announcement indicates that

Art Unit: 2614

enhancement data is being transmitted, a resource includes one or more files that contain the enhancement data" (Paragraph 0021, Lines 1-3 of Carr). The steps of delivering a package comprising the package data, delivering a trigger signal comprising the trigger data structure and in response to a selection by the viewer to receive the enhanced programming content, a step for displaying the enhanced programming content to the viewer is met by: "Generally, an ATVEF announcement indicates that enhancement data is being transmitted, a resource includes one or more files that contain the enhancement data, and a trigger synchronizes the enhancement data with the TV transmission. An announcement may describe the location of both the resource stream and the trigger stream. For each television (TV) channel, one or more enhancements may be offered as choices presented to the user, who can select which of the enhancements, if any, to view" (Paragraph 0021, Lines 1-9 of Carr).

In regard to claim 15, the "package" may include at least one file containing enhanced programming content. "Enhancement data may include graphics (e.g., web pages, multimedia information, or other digital data files), presentation layout" (Paragraph 0013, Lines 13-15 of Carr).

In regard to claim 16, the "package" may include at least one link to enhanced programming content. "Enhancement data may include graphics (e.g., web pages, multimedia information, or other digital data files), presentation layout" (Paragraph 0013, Lines 13-15 of Carr).

In regard to claim 17, the aforementioned combined teaching discloses a method and apparatus of communicating audio/video programs with enhancement data. The

Art Unit: 2614

reference fails to explicitly disclose the trigger comprising a link to enhanced programming content. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known that a trigger comprises a link to enhanced programming content so as to announce the availability of the interactive television experience to the user. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the combined teaching with a trigger that comprises a link to enhanced programming content so as to announce the availability of the interactive television experience to the user.

In regard to claim 18, the step of accepting a notification displayed to the viewer of the availability of enhanced programming content is disclosed. "For each television (TV) channel, one or more enhancements may be offered as choices presented to the user, who can select which of the enhancements, if any, to view" (Paragraph 0021, Lines 7-9 of Carr).

In regard to claims 36-37, Carr discloses the communications line comprises a plurality of different channels. "To provide for greater flexibility and/or to alleviate bandwidth concerns of the transport medium 22, some embodiments of the invention transmit (using IP multicast) enhancement data associated with multiple A/V channels (e.g., TV channels) over a link that is separate from the transport medium used to transmit A/V content (or, alternatively, that is part of the same delivery mechanism as the A/V content but is not associated with any A/V channel, e.g., an MPEG-2 transport stream with ancillary information in a data-only program separate from the A/V programs)" (Paragraph 0025, Lines 1-10 of Carr).

In regard to claim 38, the Carr reference discloses a method and apparatus of communicating audio/video programs with enhancement data. The Carr reference discloses that method may be implemented with a computer readable medium carrying computer-executable instruction. "The software or firmware can be loaded into the information delivery system in one of many different ways. For example, instructions or other code segments stored on one or more storage media or transported through a network interface card, modem, or other interface mechanism may be loaded into the system 10 and executed to perform programmed acts. In the loading or transport process, data signals that are embodied as carrier waves (transmitted over telephone lines, network lines, wireless links, cables and the like) may communicate the instructions or code segments to the information delivery system" (Paragraph 0053 of Carr).

In regard to claim 40, the aforementioned combined teaching discloses a method and apparatus of communicating audio/video programs with enhancement data. The combined teaching fails to explicitly disclose using a tag to validate the authenticity of the document. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known to use tag for identification purposes so as to ensure correct receipt of information. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the combined teaching with the use of tags for identification purposes so as to ensure correct receipt of information.

Art Unit: 2614

4. Claims 2, 4, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Rafey et al. further in view of the ATVEF specification and further in view of Keronen et al. and further in view of Valdez Jr. (US Pat No 6,426,778).

In regard to claim 2, the aforementioned combined teaching of claim 1 fails to explicitly disclose a step for viewing television programming deliverable to the receiver and in response to viewing the television programming, a step for creating the schema document associated with the television programming. The Valdez Jr. reference teaches viewing television programming deliverable to the receiver so as to facilitate the editing of the "compositions" or enhance content and in response to viewing the television programming creating the schema document associated with the television programming so as to enhance the viewing pleasure of the television viewer. "Media playback 311 provides a facility for playing back compositions locally at the playback system or may transmit a composition as video transmission 321 and data transmission 323" (Col 8, Lines 36-40). And, "to support editing of compositions of such a variety of media, a media editing system 309 is provided that may create data structures for organizing and storing information regarding a composition and perform operations for manipulating these data structures" (Col 8, Lines 22-26). Consequently, it would have been obvious to one of ordinary skill in the art to implement the combined teaching with viewing television programming deliverable to the receiver so as to facilitate the editing of the "compositions" or enhance content and in response to viewing the television programming creating the schema document associated with the television programming so as to enhance the viewing pleasure of the television viewer.

In regard to claim 4, the combined teachings of Carr and Rafey fail to explicitly disclose the step for creating the schema document comprises a step for creating the schema document with an authoring tool. The Valdez Jr. reference teaches a graphical user interface with an enhanced program editing system so to increase the ease of use for the operator. Consequently, it would have been obvious to one of ordinary skill in the art to implement the combined teaching with the step for creating the schema document comprises a step for creating the schema document with an authoring tool for the stated advantage.

In regard to claim 30, the aforementioned combined teaching of claim 1 fails to explicitly disclose the use of XML. The Valdez Jr. reference teaches the use of XML so as to represent a wide variety of document types. Consequently, it would have been obvious to one of ordinary skill in the art to implement the combined teaching with the use of XML for the stated advantage.

5. Claims 6 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr in view of Rafey et al. et al. further in view of the ATVEF specification and further in view of Keronen et al. and further in view of Goodman et al. (US Pat No 6,427,238).

In regard to claim 6, the aforementioned combined teaching of claim 1 fails to explicitly disclose delivering the enhanced programming content in an order selected from the group consisting of a sequential order and an asynchronous order. This claimed step is interpreted by the examiner as being written in the alternative, such that the claimed limitation may be met by delivering the enhanced programming content in a

Art Unit: 2614

"sequential order" or "an asynchronous order." The Goodman et al. reference teaches a timeline data structure that functions as the carousel data structure where the data modules are in sequential order (Figure 3) so as to provide a cyclic time-structured method of providing enhanced programming to the viewer. Consequently, it would have been obvious to one of ordinary skill in the art to implement the combined teaching with a timeline data structure that functions as the carousel data structure so as to provide a sequentially cyclic time-structured method of providing enhanced programming to the viewer.

In regard to claim 12, the aforementioned combined teaching of claim 1 fails to explicitly disclose a timeline data structure that functions as the carousel data structure. The Goodman et al. reference teaches a timeline data structure that functions as the carousel data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer. Consequently, it would have been obvious to one of ordinary skill in the art to implement the combined teaching with a timeline data structure that functions as the carousel data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer.

In regard to claim 13, the aforementioned combined teaching of claim 1 fails to explicitly disclose a carousel data structure functions as the timeline data structure. The Goodman et al. reference teaches a carousel data structure that functions as the timeline data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer. Consequently, it would have been obvious to one of ordinary skill in the art to implement the combined teaching with a timeline data

Art Unit: 2614

structure that functions as the carousel data structure so as to provide a cyclic time-structured method of providing enhanced programming to the viewer. The trigger data structure, the announcement data structure, and the package data structure being delivered as fast as possible is implicit to the reference. Assuming arguendo with respect to the implicit teaching of the trigger data structure, the announcement data structure, and the package data structure being delivered as fast as possible, it is submitted that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the combined teaching with transmitting enhancement data as fast as possible so as to advantageously provide the user with real-time interactive programming.

Claims 41-42 and 44 are met by that discussed above for claim 1.

In regard to claim 43, the aforementioned combined teaching fails to explicitly disclose that the timeline data structure is zeroed at the beginning of the programming. However, it is submitted that it would have been clearly obvious to one of ordinary skill in the art to implement the aforementioned combined teaching with a timeline data structure that is zeroed at the beginning of the programming so as to provide a time reference that is relative to the programming.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2614

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 571-272-7352. The examiner can normally be reached on M-F: 9:00 - 5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JM

June 08, 2005


JOHN MILLER
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